

In the Claims

1-57 (canceled).

58 (new). An isolated polypeptide having chemotactic activity selected from the group consisting of:

- (a) the polypeptide of SEQ ID NO: 2;
- (b) the mature form of the polypeptide of SEQ ID NO: 2;
- (c) a polypeptide comprising the cysteine-rich region of SEQ ID NO: 2;
- (d) an active variant of the polypeptide of SEQ ID NO: 2, wherein any amino acid specified in the chosen sequence is non-conservatively substituted, provided that no more than 15% of the amino acid residues in the sequence are so changed and said active variant retains chemotactic activity;
- (e) the active fragments or derivatized polypeptides as set forth in any one of (a) to (d), said active fragments or derivatized polypeptides retaining chemotactic activity;
- (f) a polypeptide of any of (a) to (e), wherein the polypeptide binds specifically to an antibody or a binding protein that specifically binds to the polypeptide of SEQ ID NO: 2 or a fragment thereof;
- (g) a fusion protein comprising a polypeptide according to any of (a) to (e);
- (h) a fusion protein comprising a polypeptide according to any of (a) to (e), wherein said proteins further comprise one or more amino acid sequence selected from: a membrane-bound protein, an immunoglobulin constant region, a multimerization domains, an extracellular protein, a signal peptide-containing protein or an export signal containing protein; or
- (i) a polypeptide encoded by a nucleic acid that: hybridizes under high stringency conditions with a nucleic acid consisting of SEQ ID NO: 1, or a complement of said DNA sequence; or exhibits at least about 85% identity over a stretch of at least about 30 nucleotides, with a nucleic acid consisting of SEQ ID NO: 1, or a complement of said DNA sequence.

59 (new). The isolated polypeptide of claim 58, wherein said polypeptide comprises SEQ ID NO: 2.

60 (new). The isolated polypeptide of claim 58, wherein said polypeptide comprises the mature form of the polypeptide of SEQ ID NO: 2.

61 (new). The isolated polypeptide of claim 58, wherein said polypeptide comprises the cysteine-rich region of SEQ ID NO: 2.

62 (new). The isolated polypeptide of claim 58, wherein said polypeptide comprises an active variant of the polypeptide of SEQ ID NO: 2, wherein any amino acid specified in the chosen sequence is non-conservatively substituted, provided that no more than 15% of the amino acid residues in the sequence are so changed and said active variant retains chemotactic activity.

63 (new). The isolated polypeptide of claim 58, wherein said polypeptide comprises an active fragment or derivatized polypeptide, said active fragments or derivatized polypeptides retaining chemotactic activity and comprising:

- (a) the polypeptide of SEQ ID NO: 2;
- (b) the mature form of the polypeptide of SEQ ID NO: 2;
- (c) a polypeptide comprising the cysteine-rich region of SEQ ID NO: 2; or
- (d) an active variant of the polypeptide of SEQ ID NO: 2, wherein any amino acid specified in the chosen sequence is non-conservatively substituted, provided that no more than 15% of the amino acid residues in the sequence are so changed and said active variant retains chemotactic activity.

64 (new). The isolated polypeptide of claim 58, wherein said polypeptide comprises a fusion protein comprising a polypeptide comprising:

- (a) SEQ ID NO: 2;
- (b) the mature form of the polypeptide of SEQ ID NO: 2;

- (c) a polypeptide comprising the cysteine-rich region of SEQ ID NO: 2; or
- (d) an active variant of the polypeptide of SEQ ID NO: 2, wherein any amino acid specified in the chosen sequence is non-conservatively substituted, provided that no more than 15% of the amino acid residues in the sequence are so changed and said active variant retains chemotactic activity.

65 (new). The isolated polypeptide of claim 58, wherein said polypeptide comprises a polypeptide encoded by a nucleic acid that: hybridizes under high stringency conditions with a nucleic acid consisting of SEQ ID NO: 1, or a complement of said DNA sequence; or exhibits at least about 85% identity over a stretch of at least about 30 nucleotides, with a nucleic acid consisting of SEQ ID NO: 1, or a complement of said DNA sequence.

66 (new). An isolated nucleic acid:

- (a) encoding:
 - (i) the polypeptide of SEQ ID NO: 2;
 - (ii) the mature form of the polypeptide of SEQ ID NO: 2;
 - (iii) a polypeptide comprising the cysteine-rich region of SEQ ID NO: 2;
 - (iv) an active variant of the polypeptide of SEQ ID NO: 2, wherein any amino acid specified in the chosen sequence is non-conservatively substituted, provided that no more than 15% of the amino acid residues in the sequence are so changed and said variant retains chemotactic activity;
 - (v) the active fragments or derivatized polypeptides as set forth in any one of (i) to (iv), said active fragments or variants retaining chemotactic activity;
 - (vi) a polypeptide of any of (i) to (v), wherein the polypeptide binds specifically to an antibody or a binding protein that specifically binds to the polypeptide of SEQ ID NO: 2 or a fragment thereof;
 - (vii) a fusion protein comprising a polypeptide according to any of (i) to (vi); or
 - (viii) a fusion protein comprising a polypeptide according to any of (i) to (vi), wherein said proteins further comprise one or more amino acid sequence

selected from: a membrane-bound protein, an immunoglobulin constant region, a multimerization domains, an extracellular protein, a signal peptide-containing protein or an export signal containing protein;

- (b) comprising the DNA sequence SEQ ID NO: 1, or the complement of said DNA sequence;
- (c) that hybridizes under high stringency conditions with the nucleic acid of SEQ ID NO: 1, or a complement of said DNA sequence;
- (d) exhibiting at least about 85% identity over a stretch of at least about 30 nucleotides, with the nucleic acid of SEQ ID NO: 1, or a complement of said DNA sequence; or
- (e) comprising SEQ ID NO: 17 or 18.

67 (new). The isolated nucleic acid of claim 66, wherein said nucleic acid encodes the polypeptide of SEQ ID NO: 2.

68 (new). The isolated nucleic acid of claim 66, wherein said nucleic acid encodes the mature form of the polypeptide of SEQ ID NO: 2.

69 (new). The isolated nucleic acid of claim 66, wherein said nucleic acid encodes a polypeptide comprising the cysteine-rich region of SEQ ID NO: 2.

70 (new). The isolated nucleic acid of claim 66, wherein said nucleic acid encodes an active variant of the polypeptide of SEQ ID NO: 2, wherein any amino acid specified in the chosen sequence is non-conservatively substituted, provided that no more than 15% of the amino acid residues in the sequence are so changed and said variant retains chemotactic activity.

71 (new). The isolated nucleic acid of claim 66, wherein said nucleic acid encodes an active fragment or derivatized polypeptide retaining chemotactic activity and comprising:

- (a) the polypeptide of SEQ ID NO: 2;
- (b) the mature form of the polypeptide of SEQ ID NO: 2;

- (c) a polypeptide comprising the cysteine-rich region of SEQ ID NO: 2; or
- (d) an active variant of the polypeptide of SEQ ID NO: 2, wherein any amino acid specified in the chosen sequence is non-conservatively substituted, provided that no more than 15% of the amino acid residues in the sequence are so changed and said active variant retains chemotactic activity.

72 (new). The isolated nucleic acid of claim 66, wherein said nucleic acid encodes a fusion protein comprising:

- (a) SEQ ID NO: 2;
- (b) the mature form of the polypeptide of SEQ ID NO: 2;
- (c) a polypeptide comprising the cysteine-rich region of SEQ ID NO: 2; or
- (d) an active variant of the polypeptide of SEQ ID NO: 2, wherein any amino acid specified in the chosen sequence is non-conservatively substituted, provided that no more than 15% of the amino acid residues in the sequence are so changed and said active variant retains chemotactic activity.

73 (new). The isolated nucleic acid of claim 66, wherein said nucleic acid comprises SEQ ID NO: 1, or the complement thereof.

74 (new). The isolated nucleic acid of claim 66, wherein said nucleic acid comprises SEQ ID NO: 17 or 18.

75 (new). The isolated nucleic acid of claim 66, wherein said nucleic acid is a vector.

76 (new). The isolated nucleic acid of claim 66, wherein said nucleic acid is operatively linked to expression control sequences.

77 (new). An antagonist of a polypeptide comprising:

- (a) SEQ ID NO: 2;

- (b) the mature form of the polypeptide of SEQ ID NO: 2;
- (c) a polypeptide comprising the cysteine-rich region of SEQ ID NO: 2;
- (d) an active variant of the polypeptide of SEQ ID NO: 2, wherein any amino acid specified in the chosen sequence is non-conservatively substituted, provided that no more than 15% of the amino acid residues in the sequence are so changed and said active variant retains chemotactic activity;
- (e) the active fragments or derivatized polypeptides as set forth in any one of (a) to (d);
- (f) a polypeptide of any of (a) to (e), wherein the polypeptide binds specifically to an antibody or a binding protein that specifically binds to the polypeptide of SEQ ID NO: 2 or a fragment thereof;
- (g) a fusion protein comprising a polypeptide according to any of (a) to (f);
- (h) a fusion protein comprising a polypeptide according to any of (a) to (f), wherein said proteins further comprise one or more amino acid sequence selected from: a membrane-bound protein, an immunoglobulin constant region, a multimerization domains, an extracellular protein, a signal peptide-containing protein or an export signal containing protein; or
- (i) a polypeptide encoded by a nucleic acid that: hybridizes under high stringency conditions with a nucleic acid consisting of SEQ ID NO: 1, or a complement of said DNA sequence; or exhibits at least about 85% identity over a stretch of at least about 30 nucleotides, with a nucleic acid consisting of SEQ ID NO: 1, or a complement of said DNA sequence;

wherein said antagonist comprises an amino acid sequence resulting from the modification of one or more residues of said polypeptide.

78 (new). An isolated antibody that binds specifically to a polypeptide comprising:

- (a) SEQ ID NO: 2;
- (b) the mature form of the polypeptide of SEQ ID NO: 2;
- (c) a polypeptide comprising the cysteine-rich region of SEQ ID NO: 2;
- (d) the active variants of the polypeptide of SEQ ID NO: 2, wherein any amino acid

specified in the chosen sequence is non-conservatively substituted, provided that no more than 15% of the amino acid residues in the sequence are so changed and said active variant retains chemotactic activity;

- (e) a fusion protein comprising a polypeptide according to any of (a), (b), (c) or to (d);
- (f) a fusion protein comprising a polypeptide according to any of (a), (b), (c) or (d), wherein said proteins further comprise one or more amino acid sequence selected from: a membrane-bound protein, an immunoglobulin constant region, a multimerization domains, an extracellular protein, a signal peptide-containing protein or an export signal containing protein; or
- (g) a polypeptide encoded by a nucleic acid that: hybridizes under high stringency conditions with a nucleic acid consisting of SEQ ID NO: 1, or a complement of said DNA sequence.

79 (new). The isolated antibody of claim 78, wherein said antibody antagonizes or inhibits the chemotactic activity of said polypeptide.

80 (new). The isolated antibody of claim 78, wherein said antibody is a monoclonal antibody, a polyclonal antibody, a humanized antibody, or an antigen binding fragment of said antibody.

81 (new). The isolated antibody of claim 78, wherein said antibody specifically binds to SEQ ID NO: 2.

82 (new). The isolated antibody of claim 78, wherein said antibody specifically binds to the mature form of the polypeptide of SEQ ID NO: 2.

83 (new). The isolated antibody of claim 78, wherein said antibody specifically binds to a polypeptide comprising the cysteine-rich region of SEQ ID NO: 2.

84 (new). The isolated antibody of claim 78, wherein said antibody; specifically binds to an active variant of the polypeptide of SEQ ID NO: 2, wherein any amino acid specified in the chosen sequence is non-conservatively substituted, provided that no more than 15% of the amino acid residues in the sequence are so changed and said active variant retains chemotactic activity.

85 (new). A peptide mimetic designed on the sequence or the structure or both the sequence and structure of a polypeptide comprising:

- (a) SEQ ID NO: 2;
- (b) the mature form of the polypeptide of SEQ ID NO: 2;
- (c) a polypeptide comprising the cysteine-rich region of SEQ ID NO: 2; or
- (d) an active variant of the polypeptide of SEQ ID NO: 2, wherein any amino acid specified in the chosen sequence is non-conservatively substituted, provided that no more than 15% of the amino acid residues in the sequence are so changed and said active variant retains chemotactic activity.

86 (new). A host cell transformed with a nucleic acid :

- (a) encoding:
 - (i) the polypeptide of SEQ ID NO: 2;
 - (ii) the mature form of the polypeptide of SEQ ID NO: 2;
 - (iii) a polypeptide comprising the cysteine-rich region of SEQ ID NO: 2;
 - (iv) an active variant of the polypeptide of SEQ ID NO: 2, wherein any amino acid specified in the chosen sequence is non-conservatively substituted, provided that no more than 15% of the amino acid residues in the sequence are so changed and said variant retains chemotactic activity;
- (v) a polypeptide of any of (i) to (iv), wherein the polypeptide binds specifically to an antibody that specifically binds to the polypeptide of SEQ ID NO: 2 or a fragment thereof;
- (vi) a fusion protein comprising a polypeptide according to any of (i) to (v); or
- (vii) a fusion protein comprising a polypeptide according to any of (i) to (v),

wherein said proteins further comprise one or more amino acid sequence selected from: a membrane-bound protein, an immunoglobulin constant region, a multimerization domains, an extracellular protein, a signal peptide-containing protein or an export signal containing protein;

- (b) comprising the DNA sequence SEQ ID NO: 1, or the complement of said DNA sequence;
- (c) that hybridizes under high stringency conditions with the nucleic acid of SEQ ID NO: 1, or a complement of said DNA sequence; or
- (d) exhibiting at least about 85% identity over a stretch of at least about 30 nucleotides, with the nucleic acid of SEQ ID NO: 1, or a complement of said DNA sequence.

87 (new). The polypeptide of claim 58, wherein said polypeptides further comprise a molecule chosen from radioactive labels, fluorescent labels, biotin, or cytotoxic agents.

88 (new). An isolated antisense molecule or a small interfering RNA comprising a sequence that is complementary to the polynucleotide of SEQ ID NO: 1.

89 (new). A process for producing a polypeptide comprising culturing a host cell under conditions that allow for the expression of a polypeptide, said host cell being transformed with a nucleic acid encoding:

- (a) a polypeptide comprising:
 - (i) SEQ ID NO: 2;
 - (ii) the mature form of the polypeptide of SEQ ID NO: 2;
 - (iii) a polypeptide comprising the cysteine-rich region of SEQ ID NO: 2;
 - (iv) an active variant of the polypeptide of SEQ ID NO: 2, wherein any amino acid specified in the chosen sequence is non-conservatively substituted, provided that no more than 15% of the amino acid residues in the sequence are so changed and said variant retains chemotactic activity;
 - (v) a polypeptide of any of (i) to (iv), wherein the polypeptide binds specifically

to an antibody that specifically binds to the polypeptide of SEQ ID NO: 2 or a fragment thereof;

- (vi) a fusion protein comprising a polypeptide according to any of (i) to (v); or
 - (vii) a fusion protein comprising a polypeptide according to any of (i) to (v), wherein said proteins further comprise one or more amino acid sequence selected from: a membrane-bound protein, an immunoglobulin constant region, a multimerization domains, an extracellular protein, a signal peptide-containing protein or an export signal containing protein;
- (b) comprising the DNA sequence SEQ ID NO: 1, or the complement of said DNA sequence;
 - (c) that hybridizes under high stringency conditions with the nucleic acid of SEQ ID NO: 1, or a complement of said DNA sequence; or
 - (d) exhibiting at least about 85% identity over a stretch of at least about 30 nucleotides, with the nucleic acid of SEQ ID NO: 1, or a complement of said DNA sequence.

90 (new). The process of claim 89, further comprising recovering said polypeptide.

91 (new). A method of identifying an agonist or antagonist of the polypeptide of SEQ ID NO: 2 comprising:

- (a) contacting SEQ ID NO: 2 with a candidate agonist or antagonist; and
- (b) measuring whether candidate agonist or candidate antagonist agonizes or antagonizes the activity of SEQ ID NO: 2.